REMARKS

In response to the office action of October 9, 2007, applicant presents the following remarks.

Claims 1-6, 8-9, 11-12, 14-17, 19-22, 24-25 and 28-42 are pending. Claims 1, 20 and 33 are independent claims. Each of the independent claims requires a metal layer in an active region that consists essentially of aluminum, tantalum or zirconium. Claims 7, 10, 18, 23 and 26-27 are canceled. Claim 3 is amended to correct antecedent basis. Claims 16-17 and 24-25 are amended to refer to the "*second* metal layer". Claims 36 and 39 are amended to replace "stripes" with "strips".

The claims are rejected over U.S. Patent No. 6,887,733 in view of U.S. Publication No. 2003/0197197 ("Brown") for double patenting reasons. Applicant requests that the double patenting rejection be held in abeyance until the claims are allowed.

Claims 1-6, 8-9, 11-12, 14-17, 19-22, 24-25, 28-31, 33 and 40-42 were rejected as anticipated by or obvious over Brown. Claim 32 was rejected as obvious over Brown in view of applicant's admitted prior art. Claims 34-39 were rejected over Brown in view of U.S. Patent No. 6,693,296 ("Tyan"). Claims 36 and 39 were rejected under 35 U.S.C. § 112, ¶1, as failing to comply with the written description requirement.

Section 102 and 103 Rejections over Brown

Claim 1

Claim 1 is directed to a device including an active component with a metal layer disposed on the active component and being in direct contact with an upper electrode of the active component wherein the metal layer consists essentially of aluminum, tantalum or zirconium and is capable of absorbing water and oxygen.

No Metal Layer

Brown describes an adhesive layer 130 formed of a pressure sensitive adhesive, such as an acrylic polymer adhesive (paragraph 58). Getter material, such as calcium or barium metal, can be in the adhesive (paragraph 73).

Brown fails to teach or suggest a metal layer that is in direct contact with an upper electrode, much less a metal layer that consists essentially of aluminum, tantalum or zirconium and is directly on an upper electrode. Applicant understands that the Examiner is entitled to give each claim its broadest reasonable interpretation consistent with the specification. However, the claims can only be interpreted as broadly as *their terms* reasonably allow (MPEP 2111.01 I, emphasis added). This means that the words of the claim must be given at least their plain meaning. Applicant submits that the plain meaning of the term *metal layer*, even using the broadest reasonable interpretation of the term, this would not read on a polymer adhesive layer. Moreover, a person of ordinary skill in the art would not interpret a metal layer so broadly as to read on a layer including metal and other materials, such as adhesive. Even when the polymer adhesive layer has metal material mixed in, as described by Brown, the resulting composition is not a metal layer. Therefore, the broadest reasonable interpretation of *a metal layer* does not read on layer 130 of Brown.

Moreover, the phrase "consists essentially of" does not expand the scope of the limitation to read on Brown's polymer adhesive layer. Claim 1 reads "wherein the metal layer consists essentially of". The phrase "consists essentially of" has a scope that is between "consists of" and "comprises". Although the phrase "consists essentially of" is intended to read on a metal layer that includes some measure of impurities, it does not broaden the scope of the limitation so that the claim reads on a layer formed primarily of a non-metal, i.e., a pressure sensitive adhesive, with some metal material in the adhesive.

The Examiner argues that Brown's polymer adhesive layer with getter material therein anticipates applicant's claims. Specially, the Examiner has relied on Brown's teaching of incorporating a getter into an OLED structure by forming an adhesive layer 130 that has getter material in the layer. The Examiner argues that "Brown teaches a getter layer in direct contact

with an upper electrode of an active component (figure 4 number 130) where the getter layer consist [*sic*] essentially of an alkaline earth metal (page 5 paragraph 0071). The getter layer mixed with an adhesive does read on 'consist of [*sic*] essentially of', 'consist essentially of' can comprise other elements as long as it does not affect the properties of [*sic*] primary element". As applied to the applicant's claims, the Examiner further argues that "the adhesive layer does not destroy the function of the getter layer" (Office Action of February 23, 2007, page 3).

If an applicant contends that additional steps or materials in the prior art are excluded by the recitation of "consisting essentially of," applicant has the burden of showing that the introduction of additional steps or components would materially change the characteristics of applicant's invention. In re De Lajarte, 337 F.2d 870, 143 USPQ 256 (CCPA 1964). (MPEP 2111.03) Applicant respectfully submits that breaking up a metal layer into particles and coating the particles with a polymer adhesive would affect the properties of a metal layer that consists essentially of aluminum, tantalum or zirconium.

The applicant submits that the adhesive layer *does* materially affect the characteristics of the metal. A pressure sensitive adhesive with getter material therein would not provide the same gettering properties as a metal layer formed of a metal that is capable of absorbing water and oxygen. An equal volume of getter-containing polymer adhesive would have less ability to absorb water and oxygen than an equal volume of the getter metal. Additionally, in order for the adhesive to retain sufficient adherent properties to "provide[] good adhesion between adjacent layers" and so that the getter material would not interfere with the adhesive properties of the layer, the getter material would be dispersed in small particles within the adhesive (paragraph 57). Thus, the getter in the adhesive material would not form a metal *layer*. Further, calcium or barium metal in a polymer adhesive layer would only be able to react with water or oxygen *after* the water and oxygen penetrates the adhesive layer and reaches the metal in the polymer adhesive layer. Conversely, the claimed metal layer can have a continuous surface that is able to absorb oxygen and water on contact.

No Aluminum, Tantalum or Zirconium Disclosed

As noted, Brown discloses using a getter material that reacts readily with active gases and specifically points to Group IIA metals and metal oxides. Brown does not specifically recite aluminum, tantalum or zirconium. The Examiner has not provided a reason for why a person of ordinary skill in the art would use a metal layer consisting essentially of aluminum, tantalum or zirconium after reading Brown.

No Protective Layer

Claim 1 also requires conducting lines on a substrate to provide electrical access to a device and a protective layer on the substrate to prevent shorting of the conducting lines.

Brown describes using semiconductors, such as silicon, for the substrate layer 110 and barrier layer 120 (paragraphs 50 and 52). Electronic circuitry can be built on the semiconductor material. Brown also describes the OLED region 116 as comprising pixels each including an anode layer and a cathode layer. In some embodiments, a protective layer 126 is provided between the adhesive layer 130 and the OLED region 116 (paragraph 66). The protective layer 126 can be used when the adhesive layer 130 contains particulate materials that would harm the OLED region 116.

However, Brown does not describe forming conducting lines to provide electrical access to the device and therefore does not describe a protective layer on the substrate to prevent shorting of the conducting lines. Brown only suggests using the protective layer 126 to protect the OLED region 116 from damage or harm. Brown does not suggest forming conducting lines that provide electrical access to the device, much less a protective layer to prevent shorting of the conducting lines.

For at least the aforementioned reasons, applicant submits that after amendment of independent claim 1, there is no *prima facie* case of obviousness pending with respect to claims 1-6, 8-9, 11-12, 14-17, 19, 29-32 or 34-36.

Claim 20

Claim 20 is directed to an organic electroluminescent device with a metal layer disposed on an OLED cell, wherein the metal layer consists essentially of aluminum, tantalum or zirconium and is capable of absorbing water and oxygen. Claim 20 also requires conducting lines in a bonding region of a substrate to provide electrical access to an OLED cell and a protective layer located in the bonding region on the substrate to provide electrical access to the OLED cell.

For at least the aforementioned reasons, applicant submits that after amendment of claim 20, there is no *prima facie* case of obviousness pending with respect to the claims 20-22, 24-25, 28 and 37-42.

Claim 33

Claim 33 is directed to a device with a metal layer in direct contact with an active component, wherein the metal layer consists essentially of aluminum, tantalum or zirconium and is capable of absorbing water and oxygen.

For at least some of the reasons provided above, applicant submits that after amendment of claim 33, there is no *prima facie* case of obviousness pending with respect to the claim 33.

Tyan and Applicant's admitted art

Applicant's admitted prior art and Tyan do not teach or suggest a metal layer disposed on an active component and being in direct contact with an upper electrode of the active component wherein the metal layer consists essentially of aluminum, tantalum or zirconium.

Applicant's admitted prior art and Tyan do not provide the elements not taught by Brown. Therefore, no *prima facie* case of obviousness has been made for claim 32 or claims 34-39.

Section 112 Rejections

The Examiner believes that "wherein the upper and lower electrodes are formed as stripes (*now strips*). . . wherein the getter (*now metal*) layer is patterned to form stripes (*now strips*) covering the upper electrodes" is new matter. Applicant respectfully disagrees.

On page 1 of the application as filed, starting at line 9, the application describes one method to pattern the electrodes into strips. In this example, pillars "serve to pattern the . . . electrode and getter layers during deposition to form distinct or separate portions between the pillars" (lines 9-11). Deposition is discussed on page 8, starting at line 4, and suggests that the electrodes can be patterned as strips, such as by using pillars. The specification also describes the getter material as being deposited directly on an active region, covering the active components, which include upper electrodes (page 10, lines 10-18 and page 14, lines 1-3). Because in some devices the upper electrodes and the metal layer are both patterned by the pillars, the electrodes are formed into strips, and the metal layer is on the upper electrodes, then the metal layer is also in strips. Thus, applicant submits that the rejection for lack of written description is unfounded and respectfully requests withdrawal of the rejection.

The two-month extension of time fee in the amount of $460 is being paid concurrently herewith on the Electronic Filing System (EFS) by way of Deposit Account authorization. Please apply any required charges or credits to deposit account 06-1050.

Respectfully submitted,

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